

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:

Commissioner for Patents, P.O. Box 1450

Alexandria, VA 22313 on March 28, 2005



SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT

Examining Group 1634

Patent Application

Docket No. GJE-78

Serial No. 09/937,784

Glenn P. Ladwig  
Glenn P. Ladwig, Patent Attorney

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner : Bradley L. Sisson  
Art Unit : 1634  
Applicant : Daniel Henry Densham  
Serial No. : 09/937,784  
Filed : September 28, 2001  
Confirm. No. : 7070  
For : Polynucleotide Sequencing Using a Helicase

MS AMENDMENT

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§1.97 AND 1.98

Sir:

In accordance with 37 CFR §1.56, the references listed on the attached form PTO/SB/08 are being brought to the attention of the Examiner for consideration in connection with the examination of the above-identified patent application. A copy of each cited reference is enclosed.

This information is being submitted subsequent to the later of three months after the filing date of the present application or the mailing of the first Office Action on the merits, but before the mailing of a final action or the notice of allowance. Please charge the fee of \$180.00 to Deposit Account No. 19-0065.

03/30/2005 HGUTEMA1 00000039 190065 09937784

02 FC:1806 180.00 DA

It is respectfully requested that the references cited on the attached form PTO/SB/08 be considered in the examination of the subject application and that their consideration be made of record.

Applicant respectfully asserts that the substantive provisions of 37 CFR §§1.97 and 1.98 are met by the foregoing statements.

Respectfully submitted,



Glenn P. Ladwig

Patent Attorney

Registration No. 46,853

Phone No.: 352-375-8100

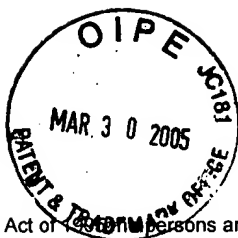
Fax No.: 352-372-5800

Address: P.O. Box 142950

Gainesville, FL 32614-2950

GPL/sl

Attachments: Form PTO/SB/08; copies of references cited therein.



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number.



Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

Application Number	09/937,784
Filing Date	September 28, 2001
First Named Inventor	Daniel Henry Densham
Art Unit	1634
Examiner Name	Bradley L. Sisson
Attorney Docket Number	GJE-78

Sheet

1

of

3

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	U1	US-			
	U2	US-			
	U3	US-			
	U4	US-			
	U5	US-			
	U6	US-			
	U7	US-			
	U8	US-			
	U9	US-			

**FOREIGN PATENT DOCUMENTS**

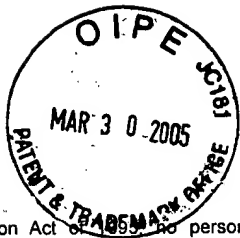
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	F1	EP 0589867 B1	04-10-1996	Pharmacia Biosensor AB	All	
	F2	EP 0648328 B1	01-21-1998	Biacore Aktieboolag	All	
	F3					
	F4					
	F5					
	F6					

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard T.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

Application Number	10/937,784
Filing Date	September 28, 2001
First Named Inventor	Daniel Henry Densham
Group Art Unit	1634
Examiner Name	Bradley L. Sisson
Attorney Docket Number	GJE-78

Sheet 2 of 3

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	R1	BIRD, L.E. <i>et al.</i> "Characterisation of <i>Bacillus stearothermophilus</i> PcrA helicase: evidence against an active rolling mechanism" <i>Nucleic Acids Res.</i> , 1998, pp. 2686-2693, Vol. 26.	
	R2	JONSSON, U. <i>et al.</i> "Real-Time Biospecific Interaction Analysis Using Surface Plasmon Resonance and a Sensor Chip Technology" <i>Biotechniques</i> , 1991, pp. 620-627, Vol. 11.	
	R3	LOFAS, S. <i>et al.</i> "Methods for site controlled coupling to carboxymethyl-dextran surfaces in surface plasmon resonance sensors" <i>Biosens. Bioelectron.</i> , 1995, pp. 813-822, Vol. 10.	
	R4	ABDEL-MONEM, M. <i>et al.</i> "Enzymic Unwinding of DNA. 2. Chain Separation by an ATP-Dependent DNA Unwinding Enzyme" <i>Eur. J. Biochem.</i> , 1976, pp. 411-449, Vol. 65.	
	R5	ABDEL-MONEM, M. <i>et al.</i> "Enzymic Unwinding of DNA. 1. Purification and Characterization of a DNA-Dependent ATPase from <i>Escherichia coli</i> " <i>Eur. J. Biochem.</i> , 1976, pp. 431-440, Vol. 65.	
	R6	EGELMAN, E. <i>et al.</i> "Bacteriophage T7 helicase/primase proteins form rings around single-stranded DNA that suggest a general structure for hexameric helicases" <i>Proc. Natl. Acad. Sci. USA</i> , 1995, pp. 3869-3873, Vol. 92.	
	R7	STASIAK, A. <i>et al.</i> "The <i>Escherichia coli</i> RuvB branch migration protein forms double hexameric rings around DNA" <i>Proc. Natl. Acad. Sci. USA</i> , 1994, pp. 7618-7622, Vol. 91.	
	R8	YU, X. <i>et al.</i> "The Hexameric <i>E. coli</i> DnaB Helicase can Exist in Different Quarternary States" <i>J. Mol. Biol.</i> , 1996, pp. 7-14, Vol. 259.	
	R9	DEAN, F.B. <i>et al.</i> "The Simian Virus 40 T Antigen Double Hexamer Assembles around the DNA at the Replication Origin" <i>J. Biol. Chem.</i> , 1992, pp. 14129-14137, Vol. 267.	
	R10	PETIT, M-A. <i>et al.</i> "PcrA is an essential DNA helicase of <i>Bacillus subtilis</i> fulfilling functions both in repair and rolling-circle replication" <i>Mol. Microbiol.</i> , 1998, pp. 261-273, Vol. 29.	
	R11	IORDANESCU, S. <i>et al.</i> "Characterization of the <i>Staphylococcus aureus</i> chromosomal gene <i>pcrA</i> , identified by mutations affecting plasmid pT181 replication" <i>Mol. Microbiol.</i> , 1993, pp. 185-192, Vol. 241.	
	R12	HA, T. <i>et al.</i> "Single-molecule fluorescence spectroscopy of enzyme conformational dynamics and cleavage mechanism" <i>Proc. Natl. Acad. Sci. USA</i> , 1996, pp 893-898, Vol. 96.	

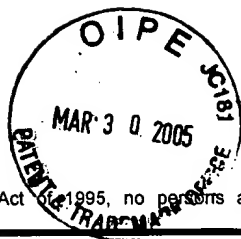
Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

Application Number	09/937,784
Filing Date	September 28, 2001
First Named Inventor	Daniel Henry Densham
Group Art Unit	1634
Examiner Name	Bradley L. Sisson
Attorney Docket Number	GJE-78

Sheet 3 of 3

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article, (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	R13	DILLINGHAM, M.S. <i>et al.</i> "Demonstration of Unidirectional Single-Stranded DNA Translocation by PcrA Helicase: Measurement of Step Size and Translocation Speed" <i>Biochemistry</i> , 2000, pp. 205-212, Vol. 39.	
	R14	BRAMHILL, D. <i>et al.</i> "A Model for Initiation at Origins of DNA Replication" <i>Cell</i> , 1988, pp. 915-918, Vol. 54.	
	R15	SCHNOS <i>et al.</i> "Initiation Protein Induced Helix Destablization at the $\lambda$ Origin: A Prepriming Step in DNA Replication" <i>Cell</i> , 1988, pp. 385-395, Vol. 52.	
	R16	Biacore Product Catalog, 2005.	
	R17		
	R18		
	R19		
	R20		
	R21		
	R22		
	R23		
	R24		
	R25		

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.